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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,590	08/25/2000	MITSUHIRO HAMASHIMA	A-377	5506
802 7590 04/17/2007 PATENTTM.US P. O. BOX 82788 PORTLAND, OR 97282-0788			EXAMINER NGUYEN, MADELEINE ANH VINH	
			ART UNIT 2625	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/648,590

Applicant(s)

HAMASHIMA ET AL.

Examiner

Madeleine AV Nguyen

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 31, 2007 have been fully considered but they are not persuasive for the following reasons:

- a. Applicant remarks that Neither Shimazaki nor Ikeshoji replace photographic background imagery with a pattern adapted to be printed without apparent printer anomalies. Shimazaki does not address the printing of photographic imagery and in Ikeshoji, photographic imagery is processed, but instead of being replaced with a background pattern, the background is treated and reinserted.

As remarked by the applicant, in Ikeshoji photographic imagery is processed. Ikeshoji discloses, "An image processing method for automatically executing operation steps of repairing a defect of an image of a document ... and changing a background image in a short time ..." (Abstract). In Fig5, Ikeshoji clearly teaches that the background of the original image is replaced by a new background pattern. For instance, "image data 22D of another background image 22 which is different from the background image 20 of the original drawing and the character and figure image data 30D of the character and figure image 30 comprising characters and figures are read from the image file... By this process, when optional background image data is added to optional character and figure image data, desired image data can be obtained easily." (col. 4, lines 50-62). In other words, the original background with stained portion or defect is replaced with a new background pattern in order to avoid visual unevenness from accruing in the background portion as claimed.

Art Unit: 2625

b. Applicant remarks that neither Shimazaki nor Ikeshoji disclose a processing unit that replaces photographic background imagery with color having a "color specification" nor an output unit that "recognizes the background portion on the basis of said color specification specified" and replaces it with "a pattern adapted to be printed without creating areas of perceptible unevenness.

Shimazaki teaches a first and second color charts comprising a plurality of color patches in which at least two original colors are combined and a background portion, which is a portion of the first or second chart other than the plurality of color patches is outputted at a black color of a predetermined density is outputted (col. 3, lines 23-57). In Fig.3, a plurality of types of tables are prepared such as print condition correction data 66, standard color conversion 68, density calibration table 70, gray correction table 71, and with the instruction from the editing device 10, a synthesizing computation section 64 synthesizes any data from the memory 65. Thus, Shimazaki discloses the background replacement based on color specification specified by the image-processing unit. Shimazaki further teaches the replacement of different background pattern such as different checkered patterns, pattern in which a white pattern unit and a single color pattern unit are combined.

Therefore, the rejection of the claims is maintained.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, 5, 6, 7-10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimazaki (US Patent No. 6,204,873) in view of Ikeshoji et al (US Patent No. 6,088,479).

Concerning claim 1, Shimazaki discloses an image processing system (Fig.1) comprising an image processing unit (10) for processing input image (from color scanner 50); and an output unit (12) for outputting an image processing in the image processing unit; wherein the image processing unit (Fig.2) has a function of cutting out a background portion of the image and effecting a color specification for the cut out background portion of the image and further has a function of specifying a method of processing the background portion (Figs.11, 12; col.7, lines 17-57; col. 17, line 17 – col. 19, line 22), and when printing the image, the output unit (Fig.3) recognizes the background portion on the basis of the color specification and carries out background processing for the recognized background portion on the basis of the specified method of processing a background pattern (col. 1, lines 7-15; col. 8, lines 15-55; col. 17, line 17 – col. 19, line 22; col. 20, lines 13-32).

Shimazaki does not directly teach that the background pattern substantially lacking perceptible unevenness, to avoid visual unevenness from accruing in the background portion. However, Shimazaki teaches that the background portion of the chart is replaced by a checkered pattern wherein unevenness of the color density at each portion of the chart is reduced and the thermal print head can be made substantially uniform within the printed image screen (col. 17, lines 32-48). Shimazaki further teaches that unevenness can be prevented by printing a

Art Unit: 2625

checkered pattern (col. 17, lines 57-61) since “in the case of a checkered pattern, because two colors are combined, optical illusion which is caused by unevenness on the image screen, and by the use of a single color can be prevented as much as possible.” (col. 18, lines 2-5). In addition, Ikeshoji et al discloses an image processing method and apparatus for automatically executing operation steps of repairing a defect of an image of a document which is read by a scanner and changing a background image (Abstract). Ikeshoji et al teaches the correction of the defect in the background of a natural image such a photograph or a picture or a document of characters and/or figures drawn on paper such as spots of stains (40) or stained portion (50) to avoid visual unevenness from accruing in the background portion (Figs. 4-7; col. 4, line 20 – col. 5, line 50). Ikeshoji further teaches the replacement of the background portion of the photographic image with a background pattern (Fig.5). It would have been obvious to one skilled in the art at the time the invention was made to combine the teaching in Ikeshoji to the correction of the background in Shimazaki in case the background substantially lacks perceptible unevenness since that can prevent the same “visible unevenness of printing from occurring in the background portion of the image” as stated in the specification (page 1, lines 27-28, page 11, lines 14-15) and avoid visual unevenness from accruing in the background portion.

Shimazaki fails to teach that the image is photographic image. Ikeshoji teaches an image processing method for correction of an image when a natural image such as photograph or a picture or a document of characters and/or figures drawn on a paper is read by an electronic means such as a scanner and recorded on a recording medium (col. 1, lines 13-18). It would have been obvious to one skilled in the art at the time the invention was made to combine the teaching in Ikeshoji to the system in Shimazaki since Shimazaki also teaches a color correction

Art Unit: 2625

method of an image read by a color scanner 50 with a possibility that the image read by the scanner is a photographic image since Shimazaki does not limit that the image data is not a photographic image.

Concerning claims 2, 9, 10, Shimazaki further teaches that the output unit converts pixels into the background pattern and replaces the background portion with a printed discontinuous pattern on the basis of the specified method of processing the background portion (Figs.7, 11-12; col. 17, line 28 – col. 18, line 29).

Concerning claims 4, 8, Shimazaki further teaches that the color specification specifies a uniform density of a specific color (col. 3, lines 35-48; col. 17, line 62 – col. 18, line 5).

Concerning claim 7, Shimazaki teaches that the image processing method (Fig.2) including the steps of replacing a background portion of an image with a specified background design (e.g., checkered design), (36, 38) ; specifying a method of processing the background portion (for second paper reference chart, Fig.7), (30); transmitting information indicating the specified method of processing and the image with the background portion replaced by the background design (40). Shimazaki further teaches at the output unit (Fig.3) the steps of receiving image data and information indicating a received method of processing the background portion (45); recognizing a background portion by detecting the specified background design the received image data (58); processing for the recognized background portion based on the received method of processing to replace the background indicator design of the background portion with a background pattern (64, 60), (Figs.7, 13; col. 1, lines 7-15; col. 8, lines 34-55; col. 17, line 17 – col. 19, line 22; col. 20, lines 13-32).

Shimazaki does not directly teach that the background pattern substantially lacking perceptible unevenness. The same remark is repeated as in claim 1 above.

3. Concerning claims 5, 12, Shimazaki teaches an image processing system (Fig.1) comprises an image processing unit (10, Fig.1; Fig.2) and an output unit (12, Fig.1; Fig.3). Shimazaki further teaches that the image processing unit (Fig.2) includes means (36, 38) for replacing a background portion of an image with a specified background design (e.g., checkered design in Fig.12); means (30) for specifying a method of processing the background portion (for second paper reference chart, Fig.7); means (40) for transmitting information indicating the specified method of processing and the image with the background portion replaced by the specified background design. Shimazaki further teaches that the output unit (Fig.3) includes means (45) for receiving image data and information indicating a received method of processing the background portion; means (58) for recognizing a background portion by detecting the specified background design the received image data; means (64, 60) for carrying out background processing for the recognized background portion based on the received method of processing, generating processed image data replacing the specified background design with a background pattern; and means (62) for printing out the processed image data (col. 1, lines 7-15; col. 8, lines 34-55; col. 17, line 17 – col. 19, line 22; col. 20, lines 13-32).

Shimazaki does not directly teach that the background pattern substantially lacking perceptible unevenness and the image is photographic image. The same remarks are repeated as in claim 1 above.

Concerning claim 6, Shimazaki further teaches that the background design includes a color specification (col.17, line 62 – col. 18, line 12; col. 20, lines 13-32).

Concerning claim 13, Shimazaki further teaches that the output unit converts pixels into the background pattern and replaces the background portion with a printed discontinuous pattern on the basis of the specified method of processing the background portion (col. 17, line 17 – col. 18, line 29).

4. Claims 3, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimazaki in view of Ikeshoji as applied to claims 1, 7, 12-13 above, and further in view of Fujima (US Patent No. 5,142,355).

Concerning claims 3, 11, 14, Shimazaki fails to teach that the discontinuous pattern is chosen from a group consisting of a stripe pattern and a dot pattern. Fujima discloses an edit control system for use in an image processing apparatus (Fig.1) wherein background portion of an image can be replaced or paint in discontinuous patterns such as stripe pattern or dot pattern (Figs.4, 7, 9). It would have been obvious to one skilled in the art at the time the invention was made to combine the teaching of different groups of patterns for replacing the background of the image in Fujima to the replaced background patterns in Shimazaki since Shimazaki teaches that besides the checkered pattern, different patterns, symbol, repeated word or phrase in any language or alphabet can be used as the pattern or what is known as a fractal diagram which resembles itself above a particular size may be used (col. 18, lines 26-29).

5. Claims 15, 16, 19, 20, 23, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimazaki in view of Ikeshoji et al as applied to claims 1, and 7 above, and further in view of Yang et al (US Patent No. 5,933,380).

Concerning claims 15, 16, 19, 20, 23, 25, Shimazaki in view of Ikeshoji fails to directly teach that the input image comprises a photograph image of a person, the replacement of a background is for identification photograph use, the recognition of the boundary between the image and the background portion of the image data define the background portion for cutting out to define the background portion for replacing. Yang et al discloses a method and apparatus for replacing the background of an image for identification and other purposes without the requirement of a photo booth. Yang specifically teaches, "When photographing for identification purposes, the subject of the image is generally a person." (col. 3, lines 61-62). Yang further teaches the line of demarcation separating the foreground and background regions of the image in order to replace the background with different scene (col. 3, line 61 – col. 4, line 41; col. 9, lines 55 – col. 10, line 62). It would have been obvious to one skilled in the art at the time the invention was made to combine the above teaching of Yang to Shimazaki in view of Ikeshoji since they do not limit the background replacement is for identification photograph purpose and the subject of the image is a person.

6. Claims 17, 18, 21, 22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimazaki as applied to claims 5, 6, 12, 13 above, and further in view of Yang et al (US Patent No. 5,933,380).

Concerning claims 17, 18, 21, 22, 24 and 26, Shimazaki in view of Ikeshoji fails to directly teach that the input image comprises a photograph image of a person, the replacement of a background is for identification photograph use, the recognition of the boundary between the image and the background portion of the image data define the background portion for cutting

Art Unit: 2625

out to define the background portion for replacing. Yang et al discloses a method and apparatus for replacing the background of an image for identification and other purposes without the requirement of a photo booth. Yang specifically teaches, "When photographing for identification purposes, the subject of the image is generally a person." (col. 3, lines 61-62). Yang further teaches the line of demarcation separating the foreground and background regions of the image in order to replace the background with different scene (col. 3, line 61 – col. 4, line 41; col. 9, lines 55 – col. 10, line 62). It would have been obvious to one skilled in the art at the time the invention was made to combine the above teaching of Yang to Shimazaki in view of Ikeshoji since they do not limit the background replacement is for identification photograph purpose and the subject of the image is a person.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2625

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeleine AV Nguyen whose telephone number is 571 272-7466. The examiner can normally be reached on Tuesday-Thursday 12:30-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Madeleine AV Nguyen
Primary Examiner
Art Unit 2625

April 6, 2007